



# FORSCHUNGSINSTITUT HOHENSTEIN

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TESTING IN THE FIELD OF TEXTILE ECOLOGY

Boennigheim, 15<sup>th</sup> February 2007  
Ho/sm

## Test Report No. 06.0.49144 (=98.0.3658 ZV9)

- Applicant** : Verosol Fabrics B.V.  
De Kieft 18  
7151 HZ Eibergen  
NETHERLANDS
- Date of order** : 18.12.2006
- Reference no. or contact person** : Mrs C. Pasmann  
Tel: 0031-545-463333  
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- Receipt of order** : 20.12.2006
- Receipt of material** : 20.12.2006
- Receipt of further information** : 27.12.2006 Application for prolongation,  
declaration of conformity  
15.01.2007 Additional information regarding flame retardand  
treatment  
01.02.2007 Certificate 18517  
07.02.2007 Information regarding test report in English language
- Details of order** : Renewal of the certificate for textile products with the label  
“Confidence in textiles – passed for harmful substances ac-  
cording to Oeko-Tex Standard 100”

*This test report comprises 8 pages*

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**Test no. of first certification (master no.)** : 98.0.3658

**Note/s** : The certificate shall be issued in German and English language.

For technical reasons, the Institute will allocate a new test number to each order for the renewal of a certificate.

The renewed certificate will always be issued under the master number indicated in the first certification. The master number in brackets will be suffixed to the current test number of this expertise and will serve to identify the relevant product. The additional designation "ZV" with a number indicates the number of times the certificate has been renewed.

The application for renewal of the certificate was submitted using the relevant forms issued for this purpose.

The applicant enclosed the declaration of conformity.

The originals of all necessary documents have been signed with a legally binding signature.

The orderer confirmed that no biological active product is used.

The orderer confirmed that partly Trevira CS as accepted flame retardant fiber is used.

Information is provided regarding following changes:

- New quality 878 and change of detergent Losin BU with Lavan NH.

Copies of Oeko-Tex certificates (18517, S06-0205, CQ 705/1, 94.0.7597) for the products in use were enclosed with the application.

All certificates were valid at the date of application for certification.

Safety data sheets were appended to the documents.

The application was made for the following article group:

Interior sunshading fabrics made of 100 % polyester and/or Trevira CS, metallised and non-metallised, white and various colours, partly produced with fibres accepted by Oeko-Tex having flame retardant properties.



The four product categories specified in Oeko-Tex Standard 100 are described as follows:

<b>Product class</b>	<b>Definition</b>
<b>I</b>	<b>Products for babies</b> Products for babies in context with this standard are all articles, basic materials and accessories, which are provided for the production of articles for babies and children up to 36 months with the exception of leather clothing.
<b>II</b>	<b>Products with direct contact to skin</b> Skin contact articles are those which are worn with a large part of their surface in direct contact with the skin (e.g. blouses, shirts, underwear etc.).
<b>III</b>	<b>Products without direct contact to skin</b> No skin contact articles are those which are worn with only a little part of their surface in direct contact with the skin (e.g. stuffings, linings etc.).
<b>IV</b>	<b>Decoration material</b> Decoration material in context with this standard are all articles including initial products and accessories which are used for decoration such as table clothes, wall coverings, furnishing fabrics and curtains, upholstery fabrics, floor coverings and mattresses.

According to the information provided by the orderer and to the specified area of use, product class IV is applicable.

The test material named below was submitted for testing.

<b>Serial no.</b>	<b>Description of article or material</b>	<b>Additional information</b>			<b>Material composition</b>
		<b>Quality</b>	<b>Article no.</b>	<b>Colour</b>	
1	interior sunshading woven fabric	ALU coated	816-000	silver-light grey	PES/AL
2	interior sunshading woven fabric	ALU coated	816-441	silver-light green	PES/AL
3	interior sunshading woven fabric	ALU coated	816-386	silver-steel blue	PES/AL
4	interior sunshading woven fabric	ALU coated	875-000	silver-light grey	PES/AL
5	interior sunshading woven fabric	ALU coated	875-562	silver-light blue	PES/AL
6	interior sunshading woven fabric	ALU coated	875-386	silver-steel blue	PES/AL
7	interior sunshading woven fabric	ALU coated	976-000	silver-light grey	PES/AL
8	interior sunshading woven fabric	ALU coated	976-562	silver-light blue	PES/AL



Serial no.	Description of article or material	Additional information			Material composition
		Quality	Article no.	Colour	
9	interior sunshading woven fabric	ALU coated	976-778	silver-brown	PES/AL
10	interior sunshading woven fabric	ALU coated	843-000	cream	PES
11	interior sunshading woven fabric	ALU coated	878-000	silver-light grey	PES
12	interior sunshading woven fabric	ALU coated	982-000	silver-light grey	PES/AL
13	interior sunshading woven fabric	ALU coated	982-292	silver-light beige	PES/AL
14	interior sunshading woven fabric	ALU coated	982-778	silver-brown	PES/AL
15	interior sunshading woven fabric	ALU coated	840-000	silver-grey	PES/AL

If only parts of certain articles were included in the tests, only these parts are named in the list of materials.

A numerical designation was provided in the list of materials. If the orderer supplied specific information about the articles, this is also included in the list.

The numerical designation of the samples is identical to the designation in the list of results.

## Test Result/s

Tests were carried out in accordance with Oeko-Tex Standard 100, including the special testing procedure laid down in Oeko-Tex Standard 201.

The test results are given in the charts below.

pH	sample					limit values acc. to Oeko-Tex Standard 100 product-classes
	1	7	11	12		
pH-value:	7,0	7,0	6,9	6,8		I + II: 4,0 - 7,5 III + IV: 4,0 - 9,0 raw prod.: 4,0 - 10,5



formaldehyde	sample					limit values acc. to Oeko-Tex Standard 100 product-classes
	5	10	11	13	15	
formaldehyde: in mg/kg (ppm)	n.d.	n.d.	n.d.	n.d.	n.d.	I: n.d. II: 75 III + IV: 300

Note: according to Japanese Law 112 "n.d." corresponds with an absorption unit < 0,05 respectively < 20 ppm.

extractable heavy metals	sample					limit values acc. to Oeko-Tex Standard 100 product-classes
	8					
in mg/kg (ppm)						I - III IV:
antimony (Sb):	< 4					Sb: 30,0 ---
arsenic (As):	< 0,05					As: 0,2 1,0
lead (Pb):	< 0,05					Pb: 0,2 1,0
cadmium (Cd):	< 0,05					Cd: 0,1 0,1
chromium (Cr) total:	< 0,1					Cr: 1,0 2,0
cobalt (Co):	< 0,1					Co: 1,0 4,0
copper (Cu):	< 4					Cu: 25,0 50,0
nickel (Ni):	< 0,1					Ni: 1,0 4,0
mercury (Hg):	< 0,01					Hg: 0,02 0,02
Cr(VI):						Cr(VI):n.d. (I - IV)

phenols	sample				limit values acc. to Oeko-Tex Standard 100 product-classes
	composite sample 10+13				
phenols in mg/kg (ppm)					
pentachlorophenol (PCP):	≤ 0,01				I: 0,05 II - IV: 0,5
2,3,5,6-tetrachlorophenol (TeCP):	≤ 0,01				I: 0,05 II - IV: 0,5
o-phenylphenol (OPP):	≤ 1,00				I: 50 II - IV: 100

forbidden AZO-colorants	sample				limit values acc. to Oeko-Tex Standard 100 product-classes
	composite sample 2+6+9+11				
human ecologically critical colorants, which can be cleaved under reductive conditions in arylamines of MAK- list III (category 1 or 2): in mg/kg (ppm)	n.d.				I - IV: 20



chlorinated benzenes and toluenes	3				sample	limit values acc. to Oeko-Tex Standard 100 product-classes
chlorinated benzenes and toluenes: in mg/kg (ppm)	n.d.					I - IV: 1,0

colour fastness	6				9		sample	limit values acc. to Oeko-Tex Standard 100 product-classes
colour fastness *): to water: to perspiration alkaline: acid: to dry rubbing **):	PES	CO	PES	CO				I - IV: 3  I - IV: 3-4 I - IV: 3-4 I - IV: 4 (3)**)
	4-5	4-5	4-5	4				

emissions	12				sample	limit values acc. to Oeko-Tex Standard 100 product-classes			
emission in mg/m <sup>3</sup> of volatile components: toluene: styrene: vinylcyclohexene: 4-phenylcyclohexene: 1,3-butadiene: vinylchloride: aromatic hydrocarbons: volatile organic substances:	0,005	< 0,002	< 0,002	< 0,002	--	--	< 0,01	0,01	I - IV: toluene: 0,100 styrene: 0,005 vinyl-c.-hexene: 0,002 4-ph-c.-hexene: 0,030 1,3-butadiene: 0,002 vinylchloride: 0,002 I - IV: 0,3  I - IV: 0,5

organo tin compounds	composite sample 10+14	sample			limit values acc. to Oeko-Tex Standard 100 product-classes
in mg/kg (ppm) TBT: DBT:	≤ 0,01 ≤ 0,01				I: II - IV: TBT: 0,5 1,0 DBT: 1,0 ---



<b>odour test</b>			<b>sample 1-15</b>			<b>limit values acc. to Oeko-Tex Standard 100 product-classes</b>
<b>sensory odour test:</b>			n.d.			<b>I - IV: n.d.</b>

Key to the abbreviations used in the table:

- P product class  
raw prod. raw products which must be treated wet during further processing  
n.d. component(s) not detectable or results below the quantification limit  
M. a representative mixture of several samples was tested together  
A test after mechanical ageing (EN 12472)

Colour fastness:

- \*) fastness rating for the staining of the adjacent fabric:  
CO = cotton, WO = wool, CV = viscose, SE = silk, PES = polyester, PA = polyamide,  
PAN = polyacrylonitrile (acrylic), CTA = triacetate;  
evaluation of colour fastness (in accordance with the fastness scale prescribed under ISO  
105):  
5 = best result, 1 = worst result
- \*\*\*) for pigment, vat and sulphurous dyes a minimum grade of colour fastness to rubbing of 3 (dry)  
is acceptable

One copy of this report will be sent to the applicant.

The Certification Office in Eschborn will be sent the original application documents with a legally binding signature and a second copy of this report for the issue of the certificate.

If relevant to the certification procedure these documents were supplemented by further declarations filled by the applicant.

## Conclusion

The material for which the certification was applied fulfils the specific requirements for product class IV of Oeko-Tex Standard 100.

It is representative of the article group for which an application for certification was made.



The certification of the following article group is approved:

Interior sunshading fabrics made of 100 % polyester and/or Trevira CS, metallised and non-metallised, white and various colours, partly produced with fibres accepted by Oeko-Tex having flame retardant properties.

Each holder of certificate has signed for the quality of his articles on his own responsibility. This is in accordance with the given declaration of conformity. He is committed to ensure this by suitable and sufficient spot checks. This commitment includes the quality of bought materials, too. In the case of delegating parts of this quality assurance to others the certifying body must be fully acquainted (see point 4 "Conformity declaration").

Oeko-Tex is authorized to carry out spot checks in order to inspect the certified goods. The certificate holder will receive a separate test report with the results of these inspections.

If the spot checks reveal a deviation from the limit values, additional tests will have to be carried out. The relevant costs will be charged to the certificate holder.

The actual version of Oeko-Tex Standard 100 is edition 01/2007. It can be downloaded directly from the Oeko-Tex Homepage (<http://www.oeko-tex.com>).

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